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Mgoduyanuka: terminal Iron Age settlement in the Natal grasslands

by

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SYNOPSIS

This paper gives the first description of a type of Late Iron Age settlement which is characteristic of a large part of the interior grasslands of Natal. The site, dated to about the seventeenth or eighteenth century, had an economy based on cattle, small stock and cultivation, particularly of maize. Cultural aspects relate it to Nguni-speaking peoples, but differentiate it from all such groups described in the anthropological literature.

INTRODUCTION

Research work at Mgoduyanuka forms part of a long-term project undertaken by the Archaeology Department of the Natal Museum to investigate Iron Age settlement and subsistence patterns in the Tugela Basin (Hall & Maggs 1979; Maggs 1980*a*, *b*, *c*, 1982; Maggs & Michael 1976). An earlier project on the southern Highveld (Maggs 1976) had identified numbers of stone structures in parts of the Tugela Basin just below the Drakensberg escarpment, but no fieldwork was carried out on them. At an early stage of the present project more detailed plotting was done of these sites from air photography. Because of the unsuitably small scale of the available coverage—around 1 : 36 000—selected areas including Mgoduyanuka were flown at low altitudes by Prof. D. Scogings, University of Natal. This not only revealed much more archaeological detail but allowed for large-scale photogrammetry, a particularly suitable surveying method for the structures in this area (Fig. 6).

Both air photographs and preliminary field inspection showed the presence of a built settlement pattern that had not previously been recorded. It was different from both Natal ethnological examples and archaeological patterns in neighbouring regions.

In the absence of previous fieldwork nothing was known of the subsistence patterns of these settlements, although the close correspondence of their distribution with that of Edwards's (1967) *Themeda–Hyparrhenia* Grassland suggested some ecological constraint on settlement location. Acocks (1975) proposes that prior to the establishment of farming communities the area was wooded, yet the presence of numerous stone structures suggests it was grassland during Late Iron Age times at least.

Fieldwork was therefore designed to provide an understanding of the built settlement pattern and its architectural details, as well as information on economy. Descriptions of the material culture, particularly pottery, was an additional aim. Mgoduyanuka was chosen as being a fair-sized settlement which included structural combinations and permutations around the basic settlement pattern, as well as ash middens which are relatively rare on these sites.

THE SETTLEMENT

Mgoduyanuka ('the hole that smells': origin of name unknown) is a small hill overlooking the Tugela on the farm Kiaora, Bergville district (S28 43 00 E29 23 40). The settlement spreads around the foot of the hill and particularly on the north-west and south-east sides (Fig. 1).

The air photographs reveal structures which are essentially circular to oval, primary enclosures varying from 5 to 20 m in diameter, which were livestock pens. In several cases secondary enclosures, which are sub-circular in plan and similar or smaller in size, abut against the outside of primary enclosures. Ground inspection shows that the basic settlement unit consisted of one of these primary enclosures, with or without attached secondary walling, surrounded by a ring of huts. The latter were built of perishable materials, with the exception that some had paved stone floors and therefore their positions are still visible today. Huts are widely spaced, both from one another and from the primary enclosure, distances in the order of 30 m being typical in the latter case. A striking feature is that the entrances to the primary enclosures face uphill and are often cobbled.

The settlement consists of a number of these modular settlement units, usually fairly dispersed and not showing any obvious pattern in relation to one another. The only exception being the linear arrangement of nine enclosures in Settlement Unit 2 examined in more detail below. Similar linear patterns occur on a number of neighbouring settlements.

The primary enclosures and their attached secondary walling, as elsewhere in the area, are frequently not built entirely of stone. Instead the majority are earthworks faced on either side with stone. They are perhaps the only Iron Age earthworks south of the Zambezi. A rare permutation on the basic earthwork theme is a concentric patterning with a ditch around the enclosure wall and outside that in turn a low earth bank, this time without stone facing. Structures of this kind have been confirmed from only three sites, Settlement Unit 1 being the only example at Mgoduyanuka.

Most of the fieldwork was done on the north-western side of the hill which includes both Settlement Unit 1 and Midden 1 (Fig. 2). Occupation was most concentrated near the foot of the hill and as a result the settlement pattern here is confused because of the repeated building and alteration in several episodes which cannot now be separated from one another. The numerous fragmentary hut floors and small stone mounds cannot, with confidence, be associated with particular settlement units. However, there is no evidence to suggest any significant change in the pattern of settlement through time. Primary and secondary enclosure walls have been robbed of stone and their entrances are no longer distinguishable, but they do show the lowering of the floor level relative to the surrounding ground surface, typical of stock pens in grassland areas of South Africa (Hall & Maggs 1979, Maggs 1976).

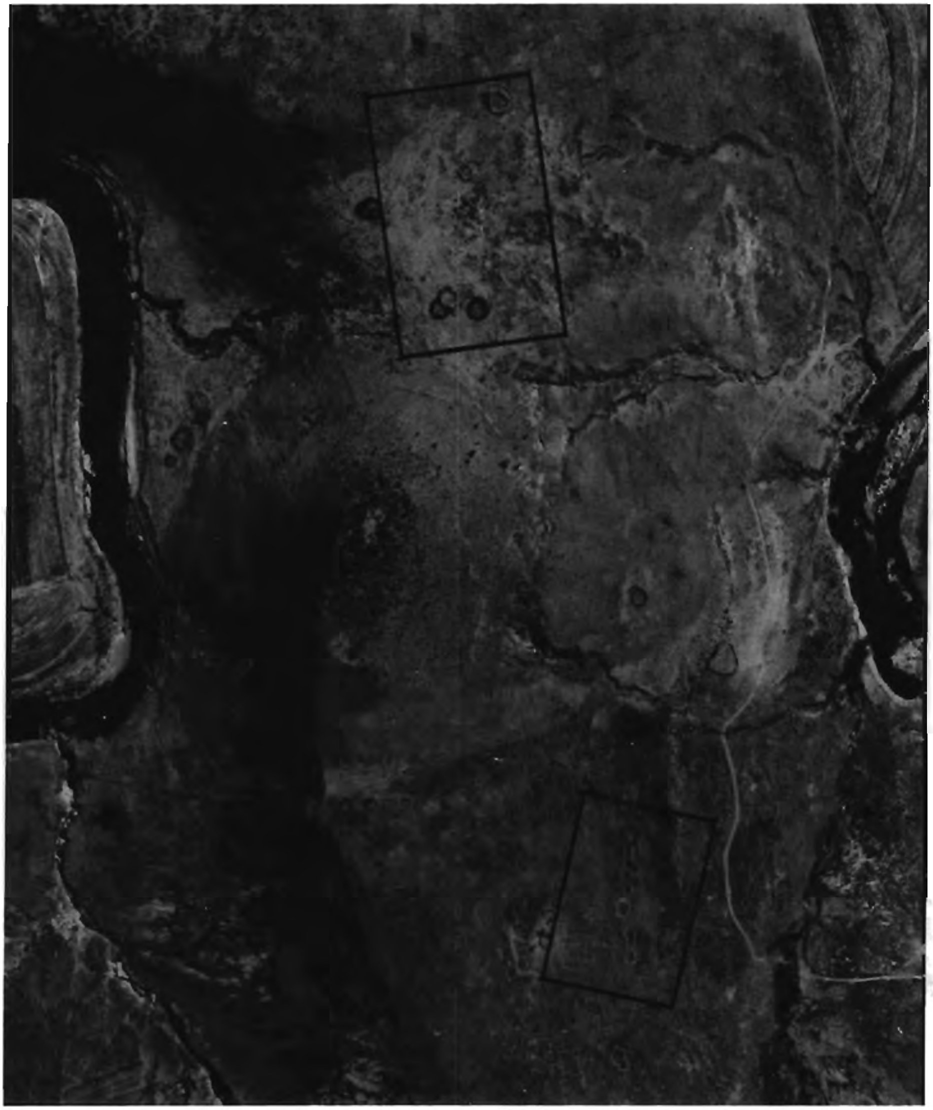

Fig. 1. Air photograph showing Mgoduyanuka Hill (centre) and surrounding settlement including location of Figs 2 and 12. Tugela River loops to the north around three sides of the settlement. Top of photograph is north-west. Note grasslands with a little woody vegetation on hills. Courtesy of Department of Survey, University of Natal.

The only obvious ash middens on the site were also in this area (Fig. 2). The relative rarity of middens on such sites when compared with many Highveld stone-walled settlements is striking and suggests different social norms about the disposal of refuse. The four middens in this area would seem to reflect the relatively intense and prolonged occupation, whereas the more dispersed nature of the remainder of the settlement apparently failed to produce appreciable midden accumulations.

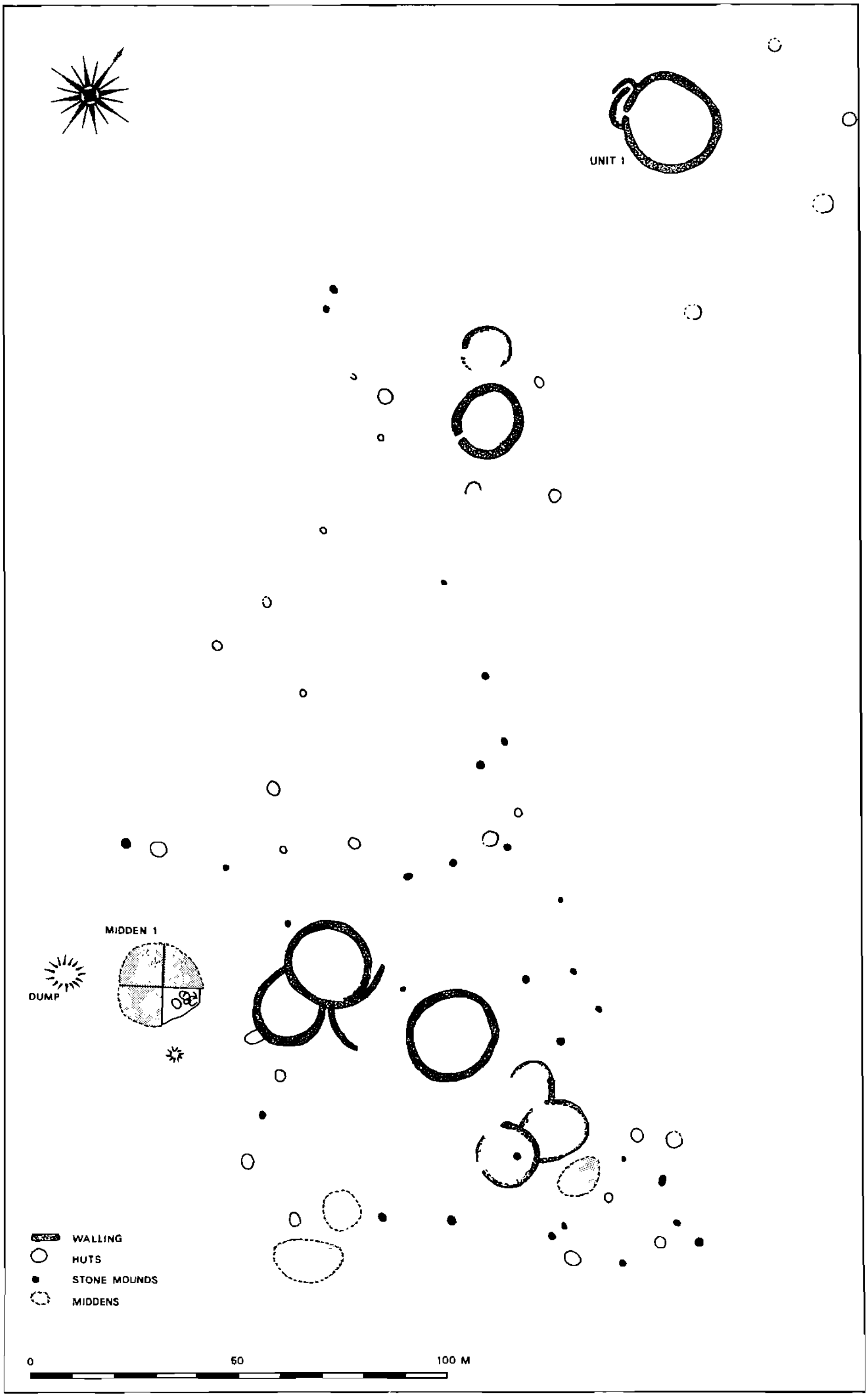
UNIT 1
MIDDEN 1
DUMP
WALLING
HUTS
STONE MOUNDS
MIDDENS
0
50
100 M

Fig. 2. Plan of north-western part of settlement including Midden 1 and Settlement Unit 1.

Midden 1

The largest and westernmost midden (Fig. 2) was chosen for excavation because it seemed the deepest. Its accumulation was evidently associated, in part at least, with a settlement unit centred on the primary enclosure and its attached secondary walling just to the east. This group of walls has evidently gone through several phases of alteration suggesting that the midden too represents more than a single phase of the occupation.

The midden is a low mound covered by rank grass and weeds and dissected by many animal burrows. For excavation it was laid out in four quadrants of which only the south-east was excavated, an area of 61 square metres (Fig. 2).

Excavation revealed a predominantly grey-brown, earthy ash, most of which had been churned up by animal burrows (Fig. 4). Small lenses of undisturbed material were visible, but only one area, from about two to four metres south of the central point was sufficiently well preserved to merit stratigraphic excavation. Here a sequence of three layers was revealed. The uppermost, Layer 1, consisted of 10 to 20 cm of the grey-brown earthy ash. Layer 2, also about 20 cm deep, was reddish in colour and more earthy, although it contained grey lenses and was partly disturbed by burrows. It also contained quantities of soft black lumps of carbonised material that crumbled on being touched. As elsewhere in the midden there was very little charcoal, but this layer contained numbers of fragmentary, burnt maize cobs.

A sample of carbonised cobs was submitted for radiocarbon dating with the result: 180 ± 45 (a.d. 1770) Pta 1699. Vogel (pers. comm.) comments that calibration would place this reading between A.D. 1630 and 1830, thus a seventeenth or eighteenth century date is probable.

The reddish material, soft black lumps, and grey fluffy ash is typical of middens formed in grassland areas where dung was used as the main fuel (Maggs 1976). The reddish colour is evidently produced in lumps of earth accidentally mixed into the dung during collection, which become oxidised during firing. The black lumps are incompletely combusted dung. Maize cobs may have substituted for twigs as kindling in the absence of woody vegetation.

Layer 3 was a thinner grey ash layer of some 10 cm making the total depth of the midden about 50 cm at its maximum. Resting on 'bedrock' and set in rather firmer midden material was a scatter of small irregular stones. They extended over much of the quadrant, but did not seem to be in any particular pattern.

'Bedrock' consisted of a firm pre-midden ground surface on which rested not only the stones but finds including faunal remains and fragmentary maize cobs.

After the 'bedrock' surface had been swept a number of features filled with midden material and stones was revealed (Fig. 3). Most of them were channels about 10 cm deep and wide cut into the hard soil. They are circular to oval in plan, eight of them being 1–1,5 m in diameter the other three being 2,5–3 m. Similar channels on other sites proved to be the foundation trenches for huts and other structures (Maggs 1976) and although here they contained no traces of the superstructure they can be regarded as foundations. The smaller examples seem too small for any function other than storage, but the larger ones were almost certainly huts. Overlapping channels (Fig. 4) demonstrate at least four separate

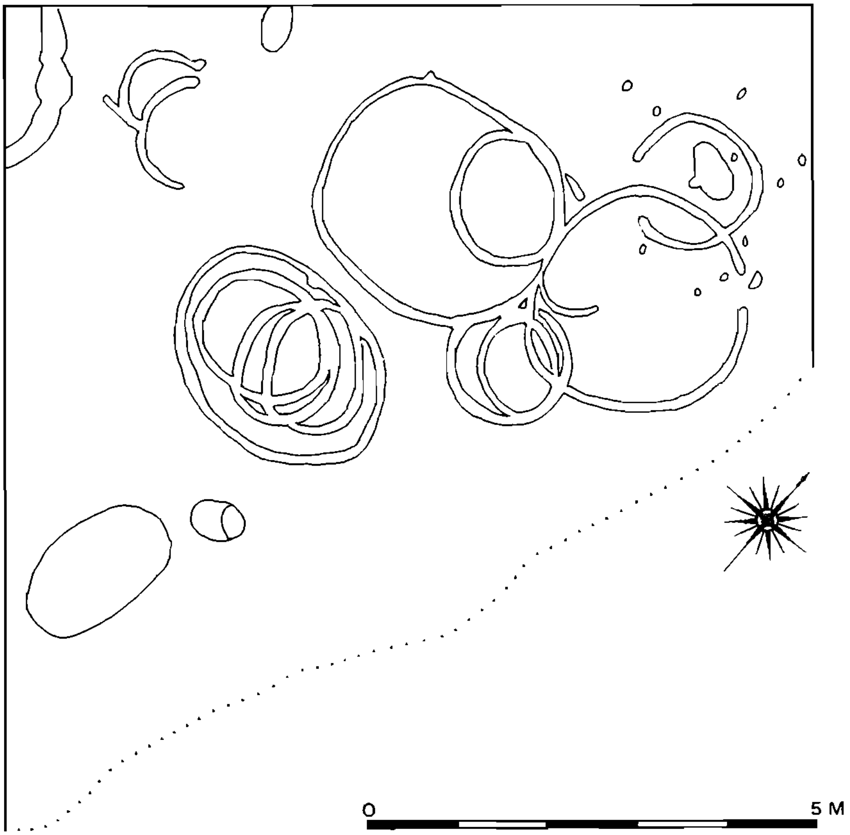

Fig. 3. Plan of features beneath midden, oval feature to the lower left.

episodes of building which suggest continued or repeated occupation of the settlement over a considerable period. It seems that the smaller structures may have been rebuilt several times on almost the same spot. The structures do not form any obvious pattern relative to one another. A much larger area than the south-east quadrant would have to be cleared to reveal any overall settlement pattern and even this would be complicated by the episodes of rebuilding.

The channel fillings were sieved separately from the midden, but they yielded pottery and bones of cattle and small stock just like the midden itself. Material from the base of the midden, including maize cobs, may well be associated with these structures which presumably predate the midden accumulation. The similarity of the material suggests that both structures and midden were the work of the same or closely related communities.

There were in addition several pit-like features, one within a small enclosure towards the east corner, one cut by a channel near the centre and two towards the south. None was deeper than 30 cm and three were between 50 and 74 cm in diameter. The largest, a shallow oval feature, 1,75 by 1,10 m, is of most interest (Fig. 5). It was sectioned to reveal evidence of a fire *in situ*. Finely stratified

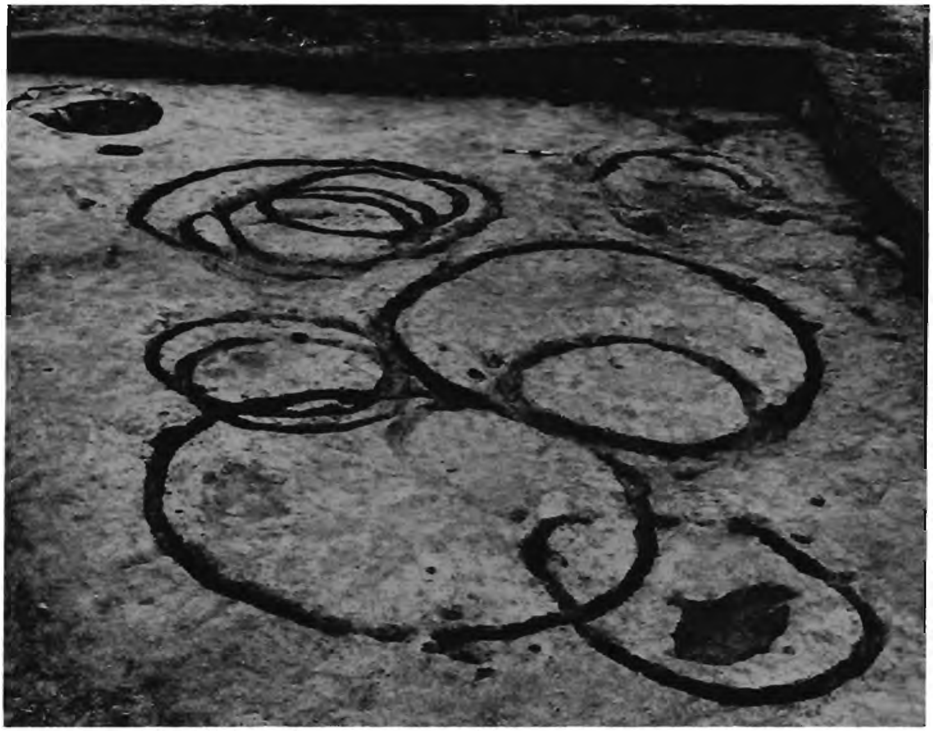

Fig. 4. Circular channels and other features beneath Midden 1. At least 4 building episodes are represented by overlapping channels.

lenses of variegated colours at the base appeared to be burnt dung which clearly had not been disturbed after firing. The overlying stones were discoloured by fire and tended to have oxidised to a reddish colour on top with a darker grey below. Evidently a fire had been set in the feature and stones had been placed on it while it was burning. A large piece of maize cob associated with this fire again suggests that cobs were used for fuel. The whole was sealed *in situ* by undisturbed material overlying the feature, which demonstrated that it predates the midden accumulation. It appears to have been a large fireplace made for a special purpose, perhaps for cooking a whole animal and perhaps used on only one occasion.

Towards the east end of the quadrant were a number of small holes. They could have been post holes, but since they do not form a definite pattern, they could be the bottoms of animal burrows.

Settlement Unit 1

The primary enclosure of this settlement unit is of particular interest, for while it conforms to the basic pattern—stone-faced earthwork with entrance uphill—it also has some rare and unique features. The concentric ditch and outer bank are rarities, while the sinuous entrance passage (Figs 6 & 10) is unique among the sites yet examined. It is also relatively large and well preserved. Careful examination of the surrounding area revealed traces of paved floors. It was therefore

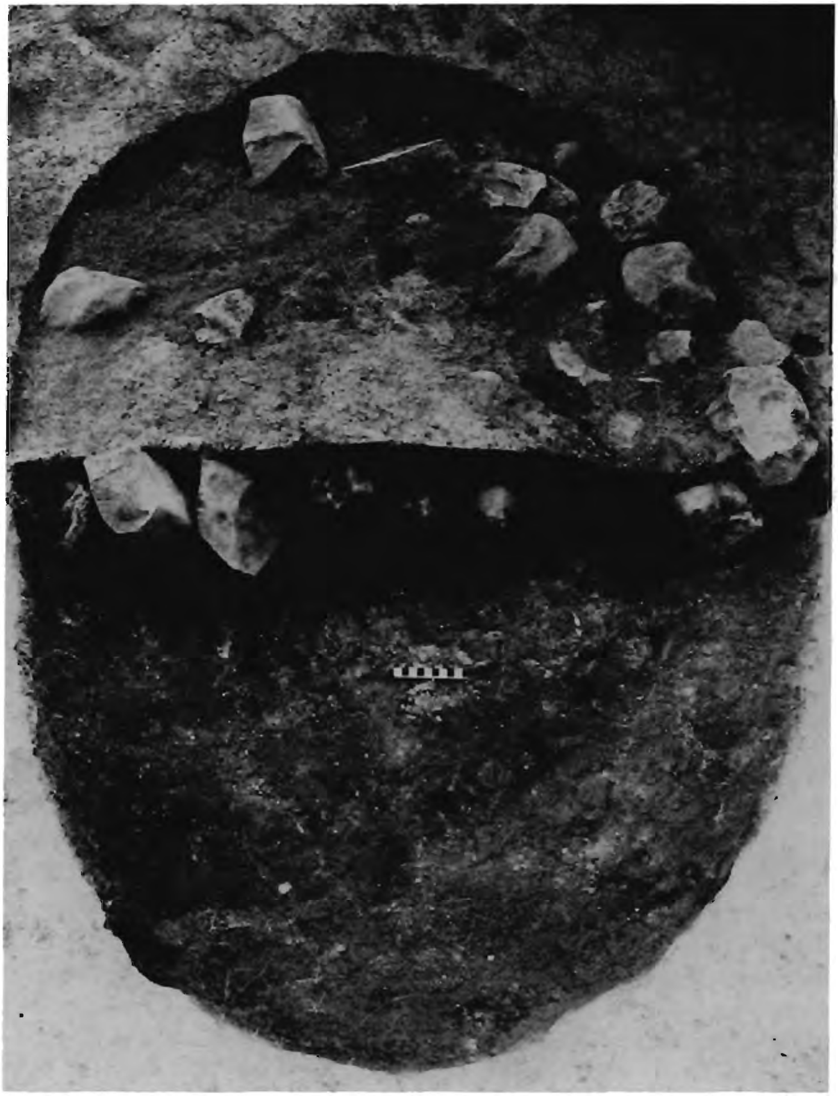

Fig. 5. Section through the oval feature showing ash and discoloured stones from fire *in situ*.

possible to establish the positions of at least some of the huts and thus arrive closer to the original settlement pattern of the whole unit.

Like most of the site it is built on a gentle north-easterly slope. Huts are spaced well apart and away from the primary enclosure. Distance between the nearest huts varies from 11 to 20 m and between the enclosure and the huts from 15 to 30 m. This dispersed pattern may explain the lack of midden accumulation. Hut diameters seem to be 3–4 m, and although a feature north of the primary enclosure is only 2 m, it may not be a hut. The paved floors are poorly preserved and none was excavated. Their distribution beside and below the enclosure strongly suggests that more were present originally, especially since an analogy with Nguni settlement patterns in general would point to the uphill side of the enclosure as most important for huts (Kuper 1980). The two halves of a large lower grindstone (Fig. 18) east of the enclosure probably marks the position of another hut, since these stones can only be moved with considerable effort.

Conventional archaeological surveying methods are inadequate to show the complex and subtle form of the earthwork. Prof. D. Scogings of the Department of Surveying, University of Natal, generously agreed to take low level air photographs and produce a photogrammetrical map of Settlement Unit 1. Photographic resolution was sufficient to allow an extremely small contour interval of only 10 cm. This produced an objective and detailed plan (Fig. 6) which reveals the structure of the earthwork more clearly than inspection on the ground. The ditch can be seen to surround the wall except on the uphill side where a 'causeway' was left to allow access to the entrance. The outer bank, very indistinct in the field, shows up well on both the east and north-west sides of the plan.

Trench 1 was laid out on the north-west side cutting through the wall, ditch and outer bank to examine their construction. The natural stratigraphy consists of a black crumbly topsoil, about 30 cm deep, grading into a dark brown soil within which yellow fragments of weathered dolerite begin to appear at about 55 cm and which replace the brown soil deeper down (Fig. 7). The black and brown soils are both produced from the weathering of dolerite and are very plastic when wet.

The ditch was originally dug down to the weathered dolerite rubble, a maximum depth of about 90 cm, with a rounded bottom and probably not very steep sides. Near the bottom were the well-preserved sherds of half a large U-shaped pot (Fig. 17). Silting has refilled the ditch to a depth of about 50 cm with black topsoil, although it is still clearly visible on the surface. A few sherds, pieces of charcoal and what appeared to be burnt grass near the present surface were the only contents of interest.

The wall appears to have been built on the natural surface, although it seems that some topsoil may have been removed for the foundations of the stone facing on either side. The core consists of a pale grey-brown coloured, fine sandy soil, quite distinct from anything in the immediate neighbourhood of the settlement unit (Fig. 8). It is about 1,5 m wide and about 60 cm high. On top of it is about 35 cm of dark brown soil and weathered dolerite lumps identical to the material from the bottom of the ditch. The foundations of the stone facing remain *in situ* but higher up much of the stone has collapsed outwards and slumped (Fig. 8). The stones are in a pale brown soil which must also have slumped down from the wall. The amount of displaced material shows that the wall was originally considerably higher than the maximum of 90 cm which shows on the section (Fig. 7).

Apart from the enormous amount of work put into the primary enclosure, the wall construction is impressive in its relative complexity. The grey-brown soil must have been carried from some distance away and therefore the reason for this extra effort needs consideration. The soils derived from dolerite are clayey and shrink to a columnar structure when dry. Experience may have shown the builders that the expansion and contraction of the soil would cause rapid collapse

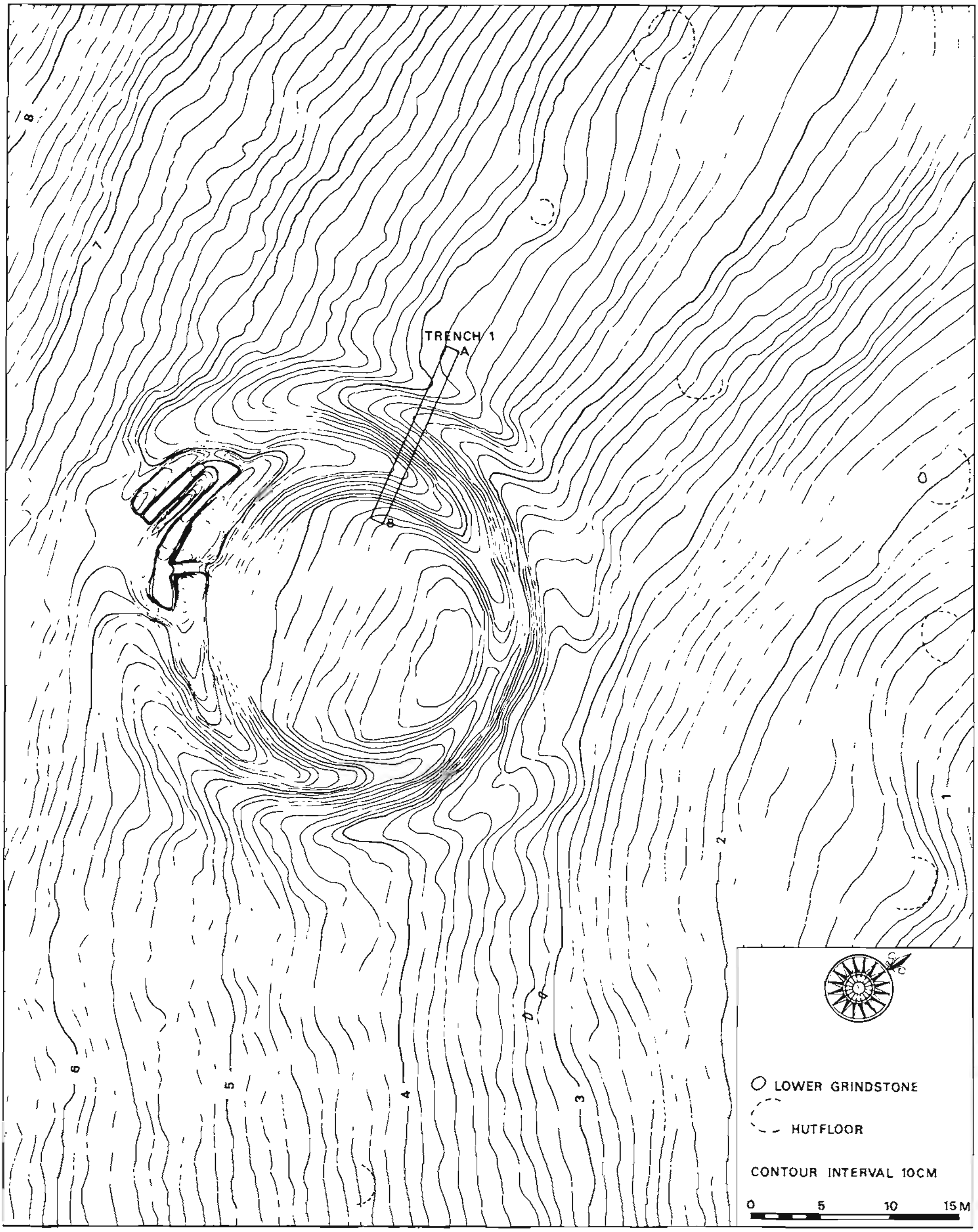
TRENCH 1
A
B
8
7
6
5
4
3
2
1
LOWER GRINDSTONE
HUTFLOOR
CONTOUR INTERVAL 10CM
0
5
10
15M

Fig. 6. Plan of Settlement Unit 1. Aerial photography and photogrammetry, Department of Survey, University of Natal.

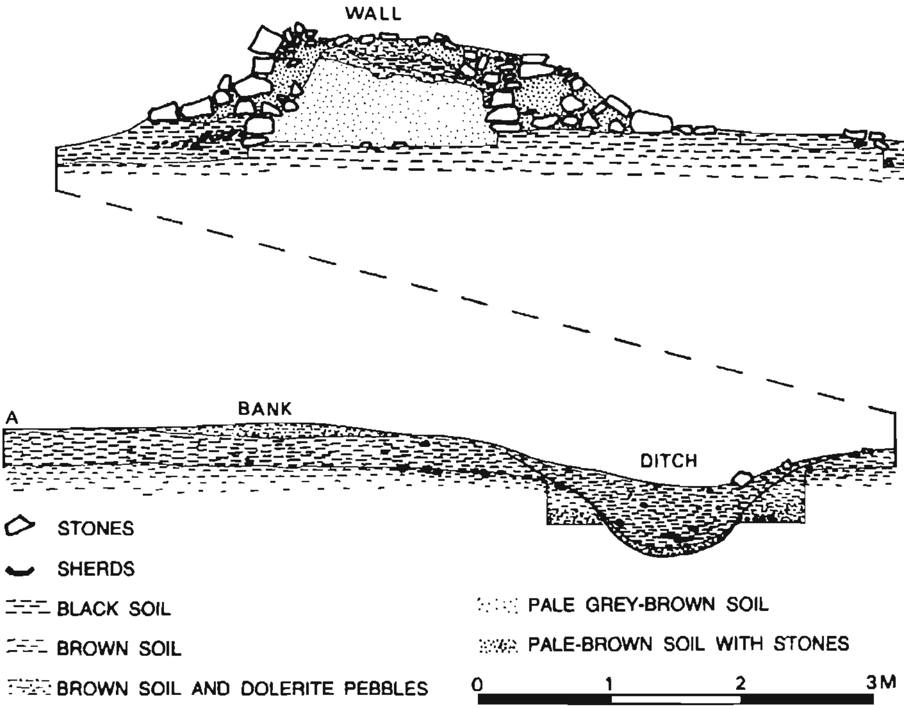
WALL
B
A
BANK
DITCH
STONES
SHERDS
BLACK SOIL
BROWN SOIL
BROWN SOIL AND DOLERITE PEBBLES
PALE GREY-BROWN SOIL
PALE-BROWN SOIL WITH STONES
0
1
2
3M

Fig. 7. Section through wall, ditch and outer bank of Settlement Unit 1. See Fig. 6 for location of section.

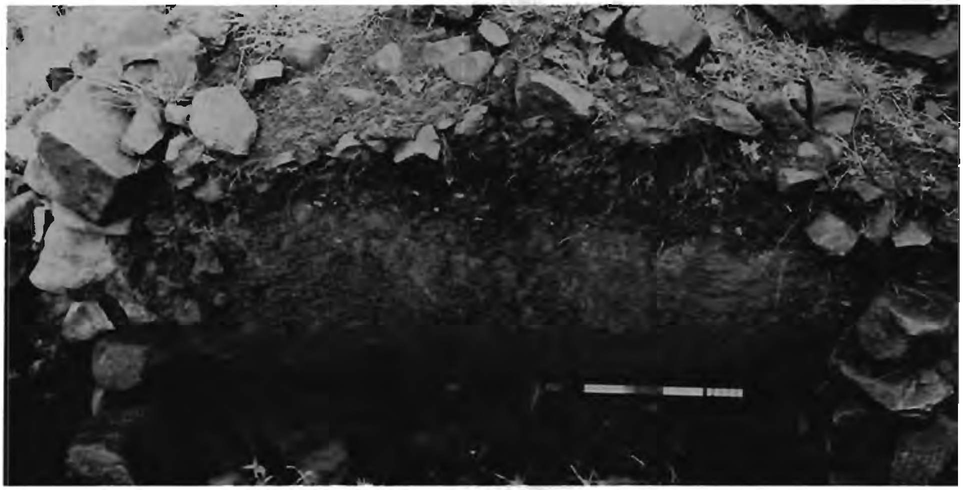

Fig. 8. Section through wall showing stone facing, partly collapsed, and two kinds of soil, one above the other, in the core.

of the stone facing, hence the choice of a more sandy soil. The capping of weathered dolerite and brown soil seems rather less plastic than the black soil and it is perhaps relatively impervious to rain. It may therefore have served to keep the base of the wall drier and therefore less liable to seasonal movement, although the result was not entirely successful, as can be seen by the slumping. While this explanation is not proven, it seems the most feasible one.

By comparison with the wall and ditch, the outer bank is a relatively minor feature. It consists of dark brown soil with some weathered dolerite rubble and in the section is barely 15 cm deep at its maximum. It does however show up in the photogrammetric survey (Fig. 6) and is clearly artificial. It must originally have been higher, as its material would have contributed to the silting of the ditch, but how much higher is not known.

Two explanations for the bank seem possible. It could be merely a dump for the upper material excavated from the ditch if only the lower material was required for the wall capping. Alternatively it could have been intended as a structure to increase protection offered by the wall to the livestock penned within.

The ditch is similarly enigmatic. Undoubtedly a 90 cm ditch concentric and close to the wall would have made the enclosure more impregnable to both human and carnivore attack. On the other hand it may simply have been the source of the material for the wall or it may have had a drainage function.

The primary enclosure has only one entrance which is carefully built of large stones which have had protruding sharp edges rounded. It forms a rather narrow passage, 60–70 cm wide and is 3 m long, as the wall ends are thickened (Fig. 9). Large rounded pieces of dolerite form a cobbled floor which is slightly higher in the middle than at either end, perhaps to prevent rain-water flowing into the enclosure.

Two secondary walls abut against the outside of the primary enclosure wall, one on each side of the entrance (Figs 6 & 10). They curve around and run roughly parallel with the primary wall, one inside the other, to form a narrow passage with a 180° bend at the northern end (Fig. 11). To enter the enclosure it is necessary first to enter the passage, follow it for about 6 m, negotiate the bend, follow the inner section for another 8 m to the entrance to the primary enclosure itself, which is set at a sharp angle to the passage (Fig. 10). There is a further 2,5 m of rather broader passage running to a dead end. While a nimble person could climb over the walls, livestock would have had to negotiate the passage and its sharp turns.

The passage walls are essentially of stone with a rubble core, rather than earthworks with stone facing. They are built to a batter and survive to a maximum height of 1,15 m above the passage floor which was probably close to their original height.

Fallen stones and soil filled the passage to a depth of about 35 cm. This was excavated to reveal a rough cobbling of angular stones smaller than those of the entrance (Fig. 11). At the sharp bend, which is the lowest part of the passage, lenses of a fine blue-black and a brown clay appear to have been silt washed down the passage. A second layer of cobbling in this area was probably a response to this tendency for the bend to become silted with slippery clay.

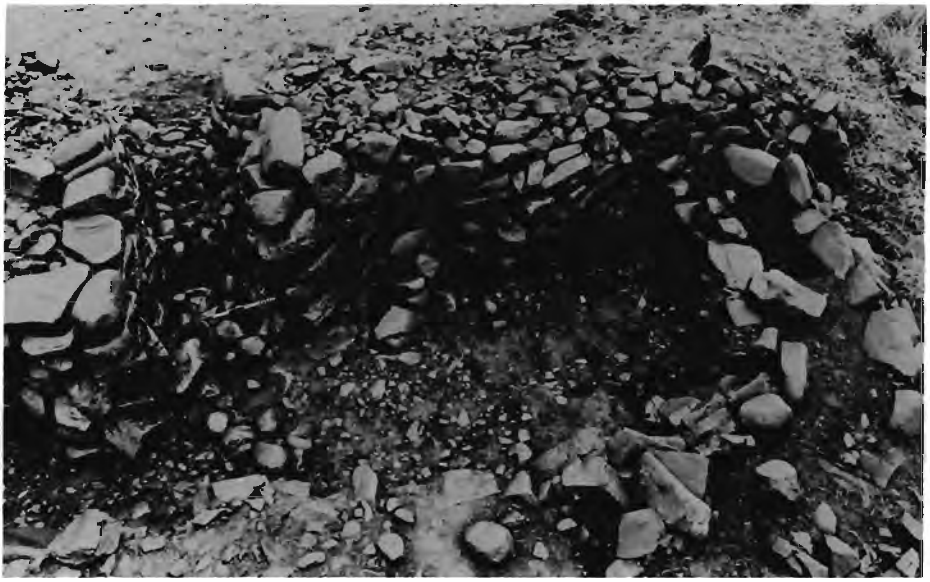

Fig. 9. Entrance to the primary enclosure showing cobbling on floor and relatively large rounded stones on either side. The dead end of the passage is to the right.

At floor level the passage is narrowest at the bend, there being only 41 cm between the inner and outer secondary wall (Fig. 11). Elsewhere it is 50 cm or more extending to 1 m by the entrance. The latter makes for increasing width with height above floor.

The passage clearly serves to restrict access to and from the primary enclosure, but for what purpose is not known. The lack of similar examples elsewhere makes

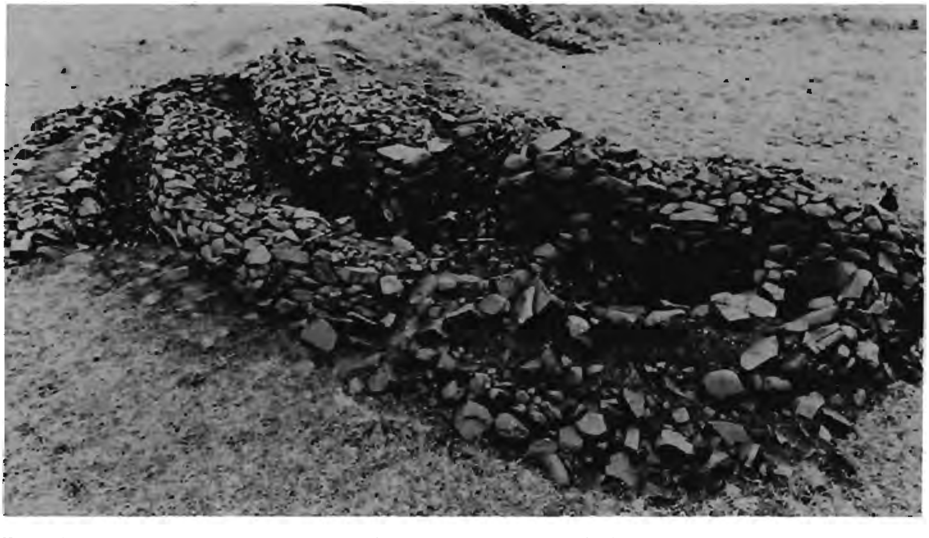

Fig. 10. Entrance passage after excavation, looking northwards. Entrance to primary enclosure in centre, Trench 1 in background.

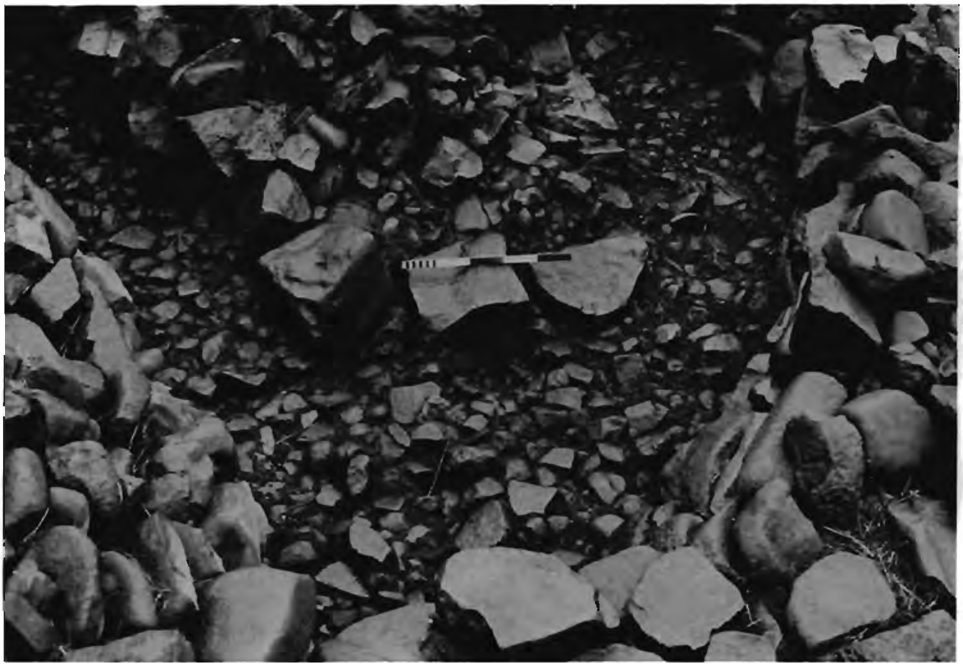

Fig. 11. Sharp bend in northern portion of entrance passage showing angular cobbling and narrow space between walls.

it somewhat idiosyncratic, yet the amount of labour needed for its construction implies some purpose. It would certainly be a tight fit for cattle. The farm owner, Mr Wood, was of the opinion that cattle new to the enclosure would have refused to go along the passage. However, if they were handled every day and had grown up used to the passage, they might have been able to negotiate it. The size is more suited to small stock yet, in view of the faunal analysis from the midden (Plug & Brown 1982) and the relative insignificance of small stock compared to cattle among southern Bantu-speaking peoples in general, it seems unlikely that this large and elaborate primary enclosure was built just for small stock. The fact that if cattle could use it at all they would have had to move slowly and one at a time may have been regarded as a measure of defence against night-time rustling.

Settlement Unit 2

Work on Settlement Unit 2 was limited to a ground survey and the excavation of one hut floor, which was all that was possible with the resources available. The aim was to record the spacial arrangement of structures within the unit as a whole.

As mentioned above, Settlement Unit 2 is an example of the combination of several primary enclosures into a row (Figs 1 & 12) to form a larger residential unit than is the case with the basic pattern as represented by Settlement Unit 1 and most of the rest of the site. This is the first description of such linear arrangements, although they are fairly common in the area. As with Settlement

Unit 2 the line of enclosures tends to follow the contour of the ground, but there are usually four or five primary enclosures rather than the nine of this unit. In recording the pattern we were helped by the well-preserved paved hut floors which enabled us to obtain a relatively complete picture of the ground plan.

The primary enclosures are again earthworks faced with stone, but being without the additional features of Settlement Unit 1, are more typical of local sites (Fig. 12). Their entrances face directly uphill and are cobbled. Diameters vary from 7,5 m of the smallest, at the northern end, to 16 m of the largest, which is near the centre and placed somewhat further apart than the others. The second from the south is actually a secondary enclosure abutting against its neighbour.

Other structures consist of paved hut floors, small piles of stones which may have been stands for grain storage vessels and larger mounds of stone. Huts are about three to four metres in diameter and they form a rough oval ring around the line of enclosures. A total of 31 huts was identified, but there may well have been more, especially on the uphill side, where structures have been affected by the building of a recent homestead (not mapped). The latter is the only known occupation of the site within living memory. The stone mounds which occur on this part of the site may indeed be the result of recent activity and some could be disturbed hut floors.

The so-called 'stands' are closely associated with individual huts and are located beside them or on the side away from the enclosures, ie. on the outside edge of the settlement unit. This location is strongly suggestive of a grain storage function, though no confirmation was forthcoming.

As with Settlement Unit 1, huts are spaced well apart from the central livestock enclosures. The distance from each hut to the nearest enclosures was measured in metres, the results being as follows:

Closest	Mean	Furthest	Standard deviation
12,0	32,2	47,5	8,4

Further work on other settlement units would be needed to determine whether these figures express a general characteristic of such sites, but these results are strongly suggestive of an established norm for the location of huts relative to stock enclosures. The distance is comparable to, but somewhat greater than is the case with Settlement Unit 1, and confirms the relatively dispersed pattern of hut location observed there.

One hut floor (No. 15) and its associated 'stand' were excavated (Fig. 13). The hut proved to be a well-paved circle four metres in diameter. There were no traces of destruction by fire nor any other hints as to its superstructure. There may well have been an earth floor over the paving, but it was not possible to identify one from the overlying soil. Three roughly spherical stones formed a tight triangle a little to the north-east of the centre. These are interpreted as the three hearth stones to support cooking pots.

A mass of broken pottery occupied much of the central and western portion of the floor. From this it was possible to reconstruct parts of nine vessels which have a considerable size range (Figs 16 & 17). Sherds from a medium-large, bag-shaped pot (Fig. 16.5) occupied the area of the 'hearth stones' although there is

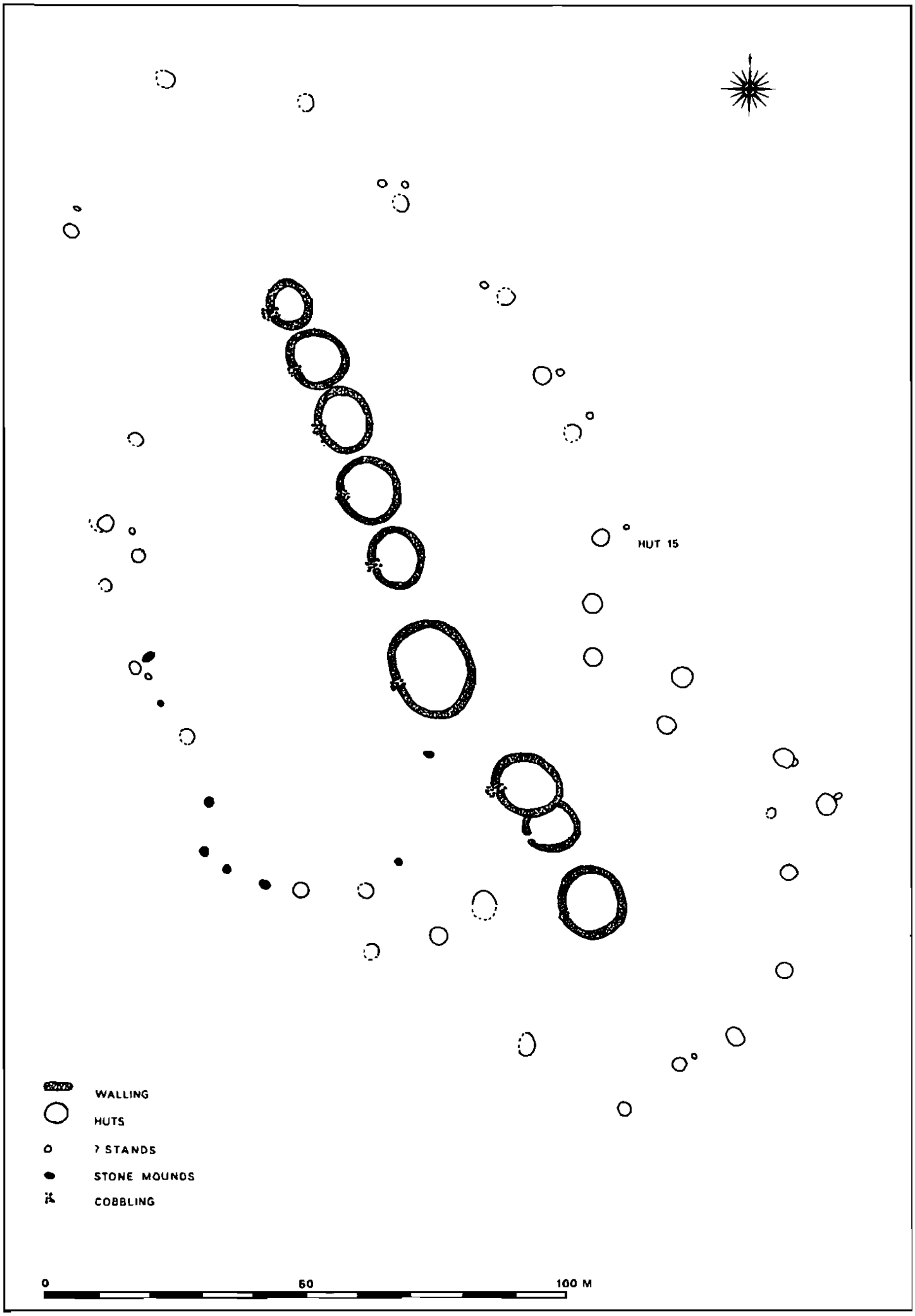
HUT 15
WALLING
HUTS
? STANDS
STONE MOUNDS
COBBLING
0
50
100 M

Fig. 12. Plan of Settlement Unit 2.

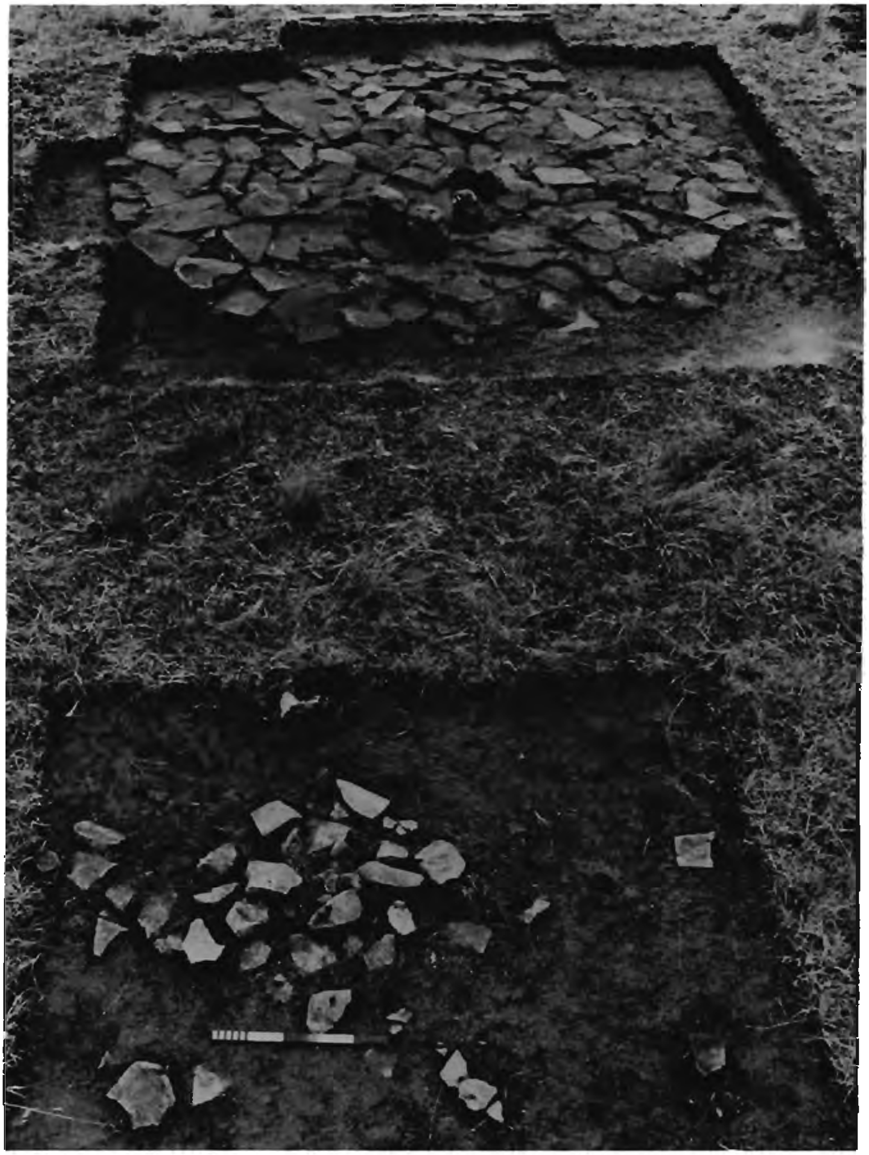

Fig. 13. Photo of Hut 15 and its 'stand' after excavation looking south-west. Note the three roughly spherical 'hearth stones' on the paved floor.

no clear evidence that this was a cooking pot. Most of the other vessels (Figs 16.2 & 3, Figs 17.1, 3 & 4) were scattered towards the north-western side of the hut. Although it is not clear which way the doorway faced, several factors suggest that it was uphill, toward the south-west:

(a) This is the side with the least pottery.

(b) The hut would face the nearest stock enclosure, and

(c) have its back to the associated 'stand', both of which are concordant with the ethnographic Zulu pattern.

(d) Most of the pottery would have been on the left or woman's side of the hut, again an analogy with Nguni ethnography.

The only factor tending against the interpretation of a south-western entrance is the position of the fireplace which would then have been towards the rear of central, rather than central or slightly forward of it. It is, however, possible that the 'hearth stones', having been only partly buried prior to excavation, may have moved somewhat downhill from their original position.

The 'stands' like that associated with Hut 15 (Fig. 13) are small heaps of stone about 0,5 m or a little more in diameter. All have been disturbed to some extent over the years, so their original form is not clear. However, they would have been some sort of upright feature, with their tops well above ground level, unlike the paving of the hut floors. They could have been the supports for large grain baskets such as were used by some Sotho- and Nguni-speaking communities in terminal Iron Age times.

FINDS

Pottery

A total of 4 736 sherds was recovered from the midden. Of these, 48 pots and eight bowls were, after reconstruction, sufficiently complete to be included in an analysis of shape. An additional nine pots were included from Hut 15 and one from Settlement Unit 1. This is the largest sample yet recovered from the terminal Iron Age in Natal, and the first to be described from a site of this kind. The methods used below are essentially comparable to other Late Iron Age descriptions from the Natal grasslands (Hall & Maggs 1979) and the southern Highveld (Maggs 1976).

The fabric contains a considerable amount of, for the most part angular, quartz grains, as well as larger pieces of stone and sometimes broken pottery. Smaller vessels especially burnished ones tend to lack the coarser inclusions.

Firing is to a range of colours—grey to buff to orange. There is usually a dark grey core and it is likely that dung was used as the fuel.

Vessels fall into five categories on the basis of shape:

1.	Bag-shaped pots	58% (Fig. 14.1, 2 & 5, Fig. 16)
2.	U-shaped pots	27% (Fig. 14.3, 4, 6 & 7, Fig. 17.5)
3.	Globular pots	3% (Fig. 14.8)
4.	Open-mouthed bowls	7% (Fig. 15.9 to 13)
5.	U-shaped bowls	4% (Fig. 15.8)

The first two categories, which account for the great majority of the assemblage show a very similar range in size. Rim diameters were measured where possible, the mean for both being 21 cm with a standard deviation of 9 cm. The smallest and largest vessels were around 8 cm and 40 cm respectively. However, the two globular pots at 9 cm and 14 cm being at the smallest end of the range suggest a more specialised function than the others. About half of the bag-shaped pots show some development towards a neck but this is always poorly defined. The bag-shaped pots with burnish all have necks and they tend to be rather smaller.

Bowls comprise only 11 % of the assemblage and their number is so small that little can be said about them. However, the open-mouthed ones, with rim diameters of 18 to 26 cm, seem larger as a group than the U-shaped ones which are 8 to 20 cm.

Other characteristics associated with the different vessel types are given in Table 1. An interesting aspect is the tendency for burnish to be associated with bag-shaped and globular pots to a greater extent than U-shaped pots, while bowls, with one possible exception (Fig. 15.8), have no burnish. Decoration seems restricted to a few bag-shaped pots.

TABLE 1

Characteristics of reconstructed vessels.

Vessel type	1	2	3	4	5
Lip Rounded	17	12	2	4	1
Lip Flattened	7	2			
Lip Pointed	9	1		1	
Lip Miscellaneous	3	2			2
Surface Matt	21	13		5	3
Surface Ochre burnish	16	3	2		
Surface Black burnish	2	1			
Decoration: Finger impressions	3				
Total	39	17	2	5	3

Table 2 shows the characteristics of all sherds from the midden. From this it is clear that most lips are rounded (70 %), some are pointed (14 %) and a few are flattened (8 %) or too irregular to categorise (7 %).

TABLE 2

All sherds from Midden 1.

	Decorated sherds				Undecorated sherds				
	Matt	Burnish			Matt	Burnish			
		Plain	Ochre	Black		Plain	Ochre	Black	Total
Rim sherds									
Lip Rounded					143	3	69	2	217
Lip Flattened					13	1	10		24
Lip Pointed			1		33		9	2	44
Lip Miscellaneous					14	1	8		23
Body sherds	5		16	3	2 999	70	1 199	160	4 428
Total	5		17	3	3 202	75	1 295	164	4 736

While the rarity of decoration gives this attribute a relatively minor role in defining the assemblage, coloured burnish is of more significance. One third of all sherds is burnished, the great majority with red ochre colouring. Some are black but few are burnished without colouring additional to the natural fired clay (Table 2). Such a large proportion of ochre burnish is unusual, south of the Vaal River at least, but seems to be characteristic of assemblages from this type of settlement.

The ochre was applied to the whole outer surfaces of the pots and often extends over the lip and a little way down the interior surface as well (Fig. 14.1 & 2, Fig. 17.4).

The limited decoration consists mainly of finger-nail impressions placed in vertical rows (Fig. 15.5, 6 & 7), about the most basic technique possible. It was applied to fairly small bag-shaped pots with either ochre or black burnish. Apart from the 20 fingernail impressed sherds representing at least five vessels, five other unburnished sherds show different forms of decoration. Two have comb-stamping applied rather irregularly (Fig. 15.1), two have finger-pinching (Fig. 15.2) and one has what appears to be cross-hatching (Fig. 15.3). All five are too small to reveal the whole motif. Of interest is the complete lack of applied bosses (*isumpa*—wart) as seen on terminal Iron Age and historic sites in Zululand (Hall & Maggs 1979, Hall & Mack in press).

The nine reconstructable pots from Hut 15 give us something of an inventory for a single hut (Figs 16 & 17). All are more or less bag-shaped and their sizes (rim diameters: 11–34 cm) cover most of the range observed from the midden. None shows fire blackening nor any other obvious indication of function; however, the smaller ones with diameter 11–20 cm (Fig. 16.1 & 3–5) would probably have had different uses from those of 30–34 cm (Fig. 17.1–4) which would have had limited portability. Parts of two small and crudely made pinched pots from the midden were probably the work of children.

Metal items

Two fragments of iron blades were recovered from the midden and another from Hut 15. One from the midden is the tip of a spearhead or knife. There is no trace of smelting on the site nor anywhere in the neighbourhood.

Stone artefacts

Large and deeply hollowed-out lower grindstones (Fig. 18) are typical of this and related sites though many complete examples have been removed in recent years for use as bird-baths. The upper stones associated with them are also relatively large, oval in plan and often worn down to a relatively thin section with a flattish grinding surface on either side (Fig. 19). Lower stones were all of sandstone as were eleven of the uppers, the remaining two being of dolerite. Both materials are available close at hand and an outcrop of indurated sandstone immediately north of Settlement Unit 1 showed signs of quarrying, while its texture matched that of some of the upper stones noted. Both uppers and lowers show signs of pecking and the ends of many uppers had been used as hammers. A well used dolerite hammer was also found.

Two stones with relatively small hollows appear to be mortars of some sort. Other utilised stone included five polished dolerite pebbles which were probably used for burnishing (Fig. 19).

There was also a considerable number of manuports in the midden, most being river pebbles of amygdaloidal basalt which are washed down by the Tugela from the basalts of the higher Drakensberg.

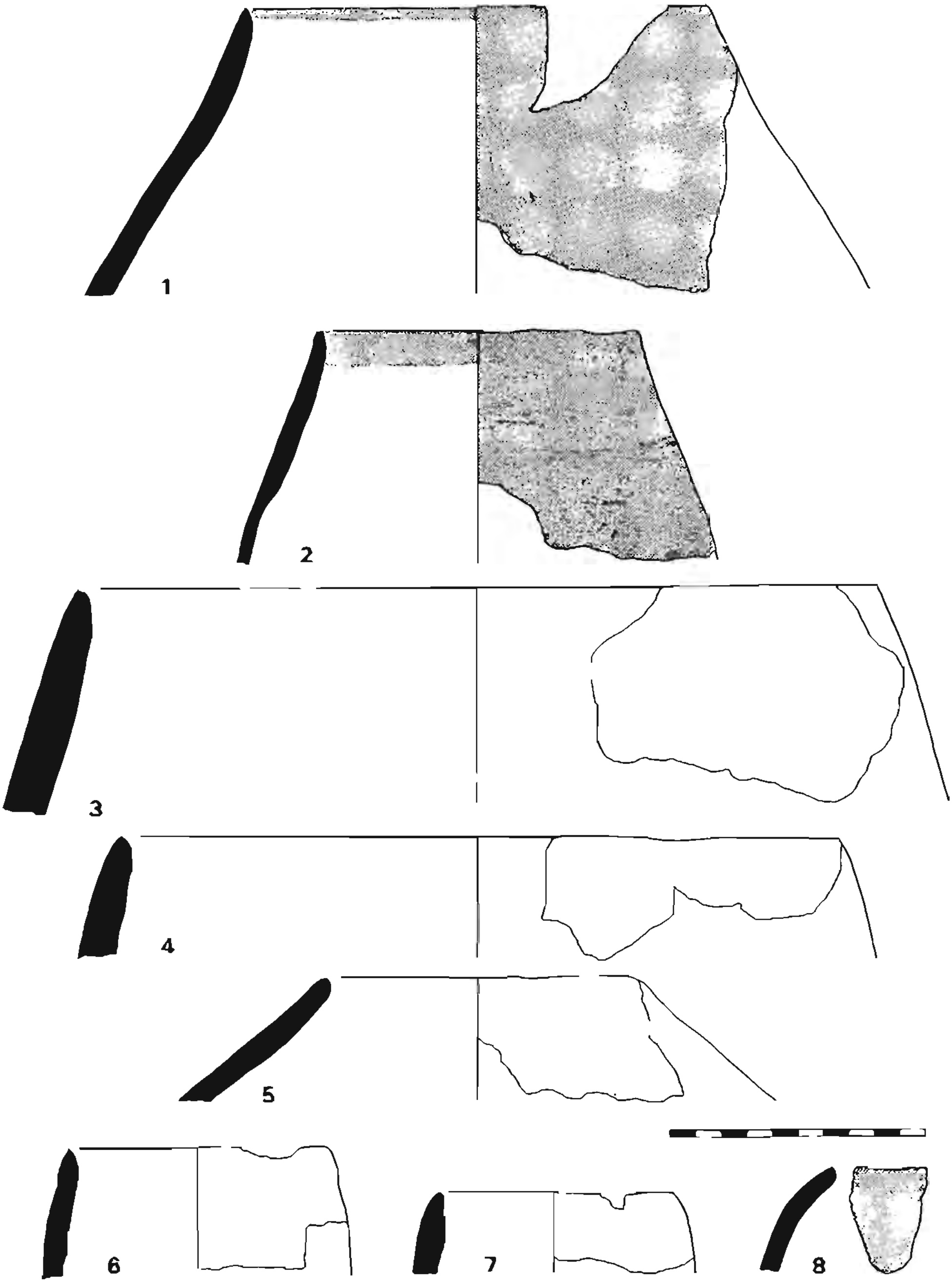

Fig. 14. Pots from Midden 1   1, 2 & 5. Bag-shaped pots. 3, 4, 6 & 7. U-shaped pots. 8. Globular pot. Stippling indicates red burnish. Scale in centimetres.

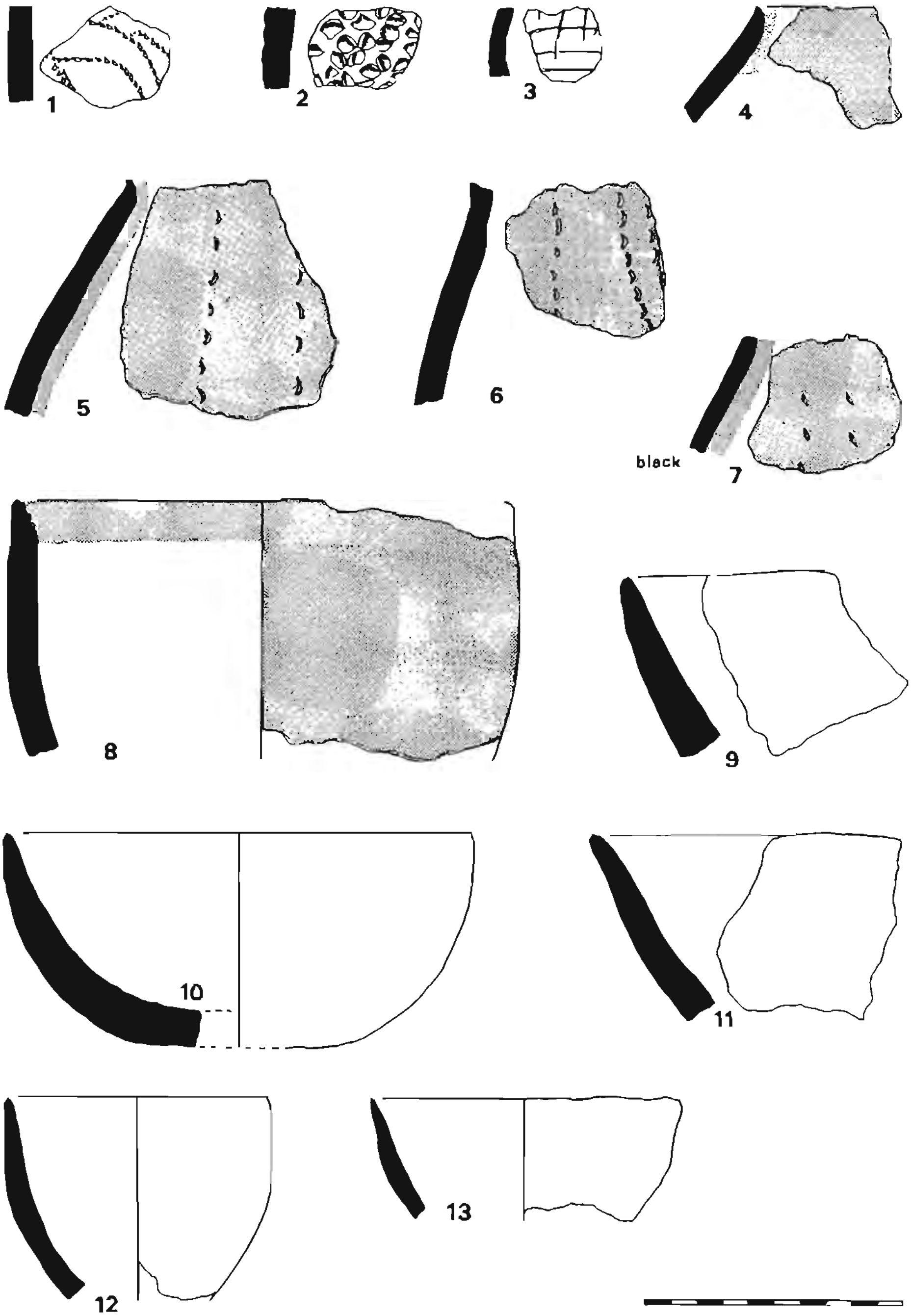

Fig. 15. Vessels from Midden 1. 1. Comb-stamping. 2. Finger pinching. 3. Cross-hatching. 4–7. Bag-shaped pots with (5–7) finger-nail impressions. 8. U-shaped vessel, probably a deep bowl: but the shape is uncertain. 9–13. Open-mouthed bowls. Stippling indicates red burnish. Scale in centimetres.

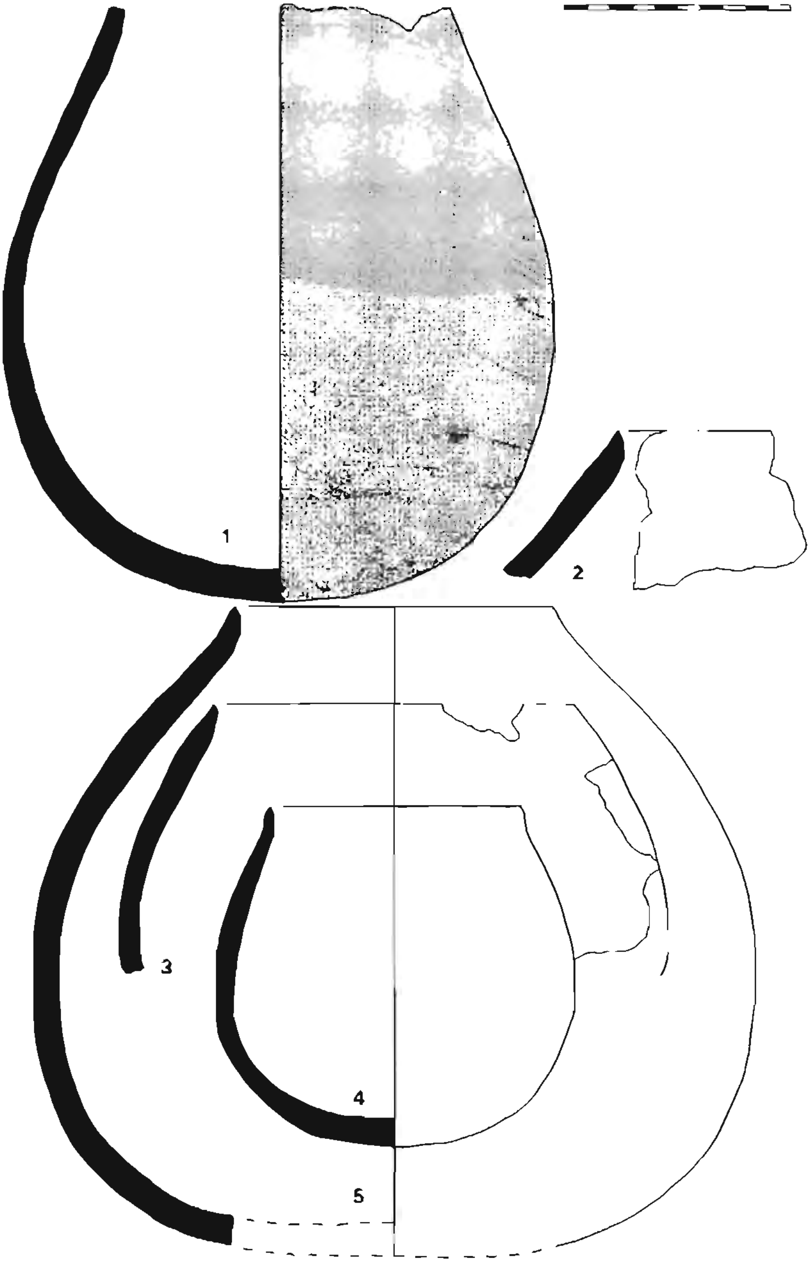

Fig. 16. Bag-shaped pots from Hut 15. Stippling indicates red burnish. Scale in centimetres.

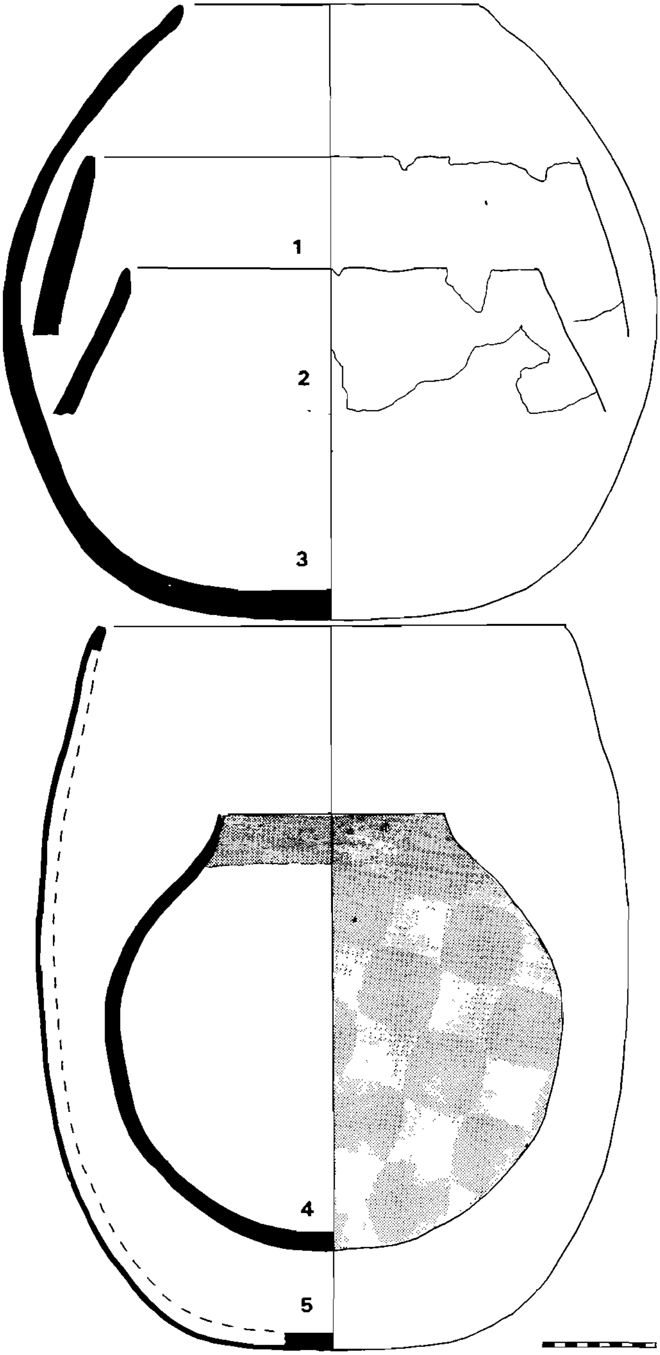

Fig. 17. 1–4. Large bag-shaped pots from Hut 15. 5. Large U-shaped pot from Settlement Unit 1. Stippling indicates red burnish. Scale in centimetres.

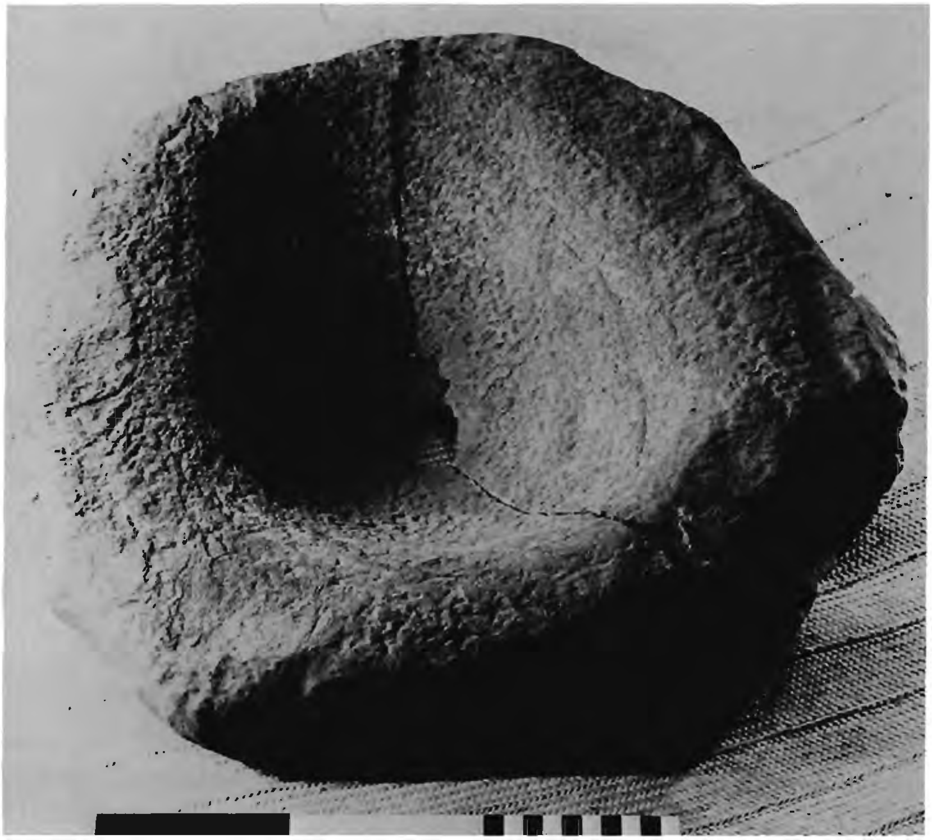

Fig. 18. Large sandstone lower grindstone typical of the site, from Settlement Unit 1.

Bone and ivory artefacts

A variety of artefacts was recovered from the midden. Several well-finished pieces attest to the use of these materials for several specific purposes.

Most delicate are two spoon bowls plus a fragment of a third (Fig. 20) made of bone and ivory. Their undersides are keeled and the keels have a row of notches—the ivory one along its full length (Fig. 20), the bone one only starting close to the broken-off handle. Their shape is similar to that of snuff spoons recorded from Zulu and some other Nguni peoples (Davison 1976). Such spoons, usually made of cattle horn, but also of bone and ivory, have long handles which serve a variety of toilet functions and allow the spoon to be carried in the owner's hair. The handles are sometimes decorated with engraved lines. No handles were recovered from Mgoduyanuka, but a fragment perhaps from a handle or from a pin (described below) has fine cross-hatching on it (Fig. 20). There can be little doubt that the spoons from this site indicate the taking of snuff.

One complete and four fragmentary bone 'pins' were recovered from the midden. They are triangular to D-shaped in section, bevelled to a flat section at the broad end and curving gently to a point at the other (Fig. 20). The complete

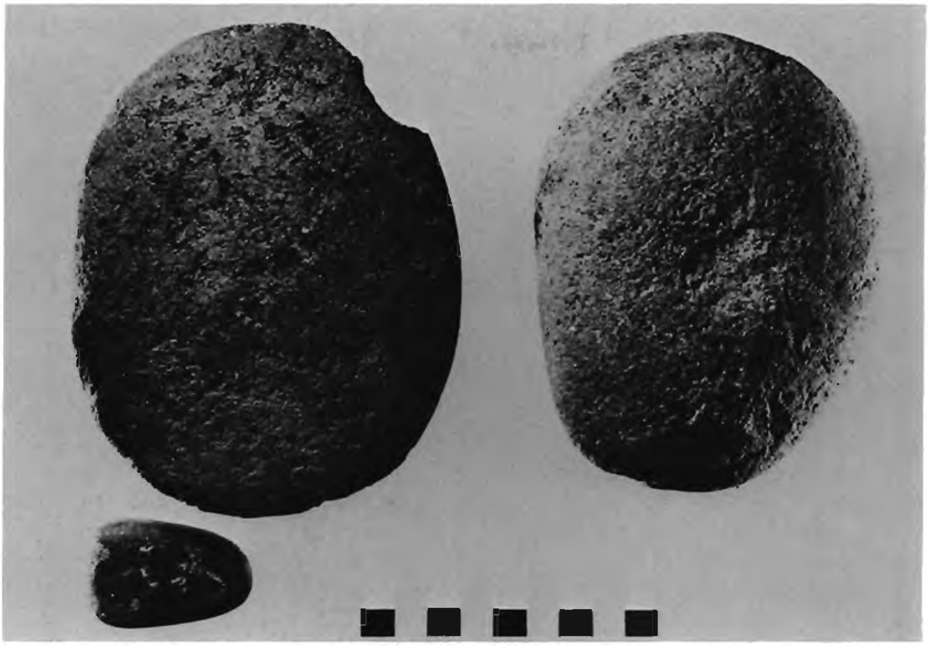

Fig. 19. Two typical upper grindstones of sandstone. Left, from Settlement Unit 1, right, from the midden. Dimple in the latter is unusual. Lower left—small dolerite burnisher from the midden.

one is 8,7 cm long and all are well polished. Similar bone pins, usually somewhat longer and often decorated, are recorded from among the Zulu in the nineteenth and twentieth centuries (Davison 1976) who use them as hair-pins. This is the first archaeological record of such artefacts.

Three flat pieces of bone with perforations were recovered. Only one is complete, this being a bodkin-like object pointed at one end and rounded at the other near the perforation (Fig. 20). It is 5 cm long and made of a piece of split rib bone. Of the same material is a broken piece which has a notch at one end and two perforations (Fig. 20). The third is of a denser bone and well polished. It is broken at both ends, one of which retains part of a perforation (Fig. 20). The function of these pieces is not known.

A thin spatulate object 13,8 cm long and well polished was also made from a split rib (Fig. 20). One end is pointed and the other rounded, while another fragment preserves the rounded end of a second example. Such flexible and delicate artefacts may have served as sweat scrapers, for they resemble those used historically by the Zulu, which were often made from ribs (Davison 1976).

Also made from ribs or similar flat pieces are a number of bone scrapers. They characteristically have rounded and well-worn ends (Fig. 20). These typical Late Iron Age tools were used for skin dressing (Maggs 1976).

Several pointed bone splinters show some abrasion or polish at their ends, but none had been carefully shaped.

Seven pieces of chewed and partly digested bone reflect the habit of livestock to gnaw bones in a phosphorus-deficient, sour grazing environment.

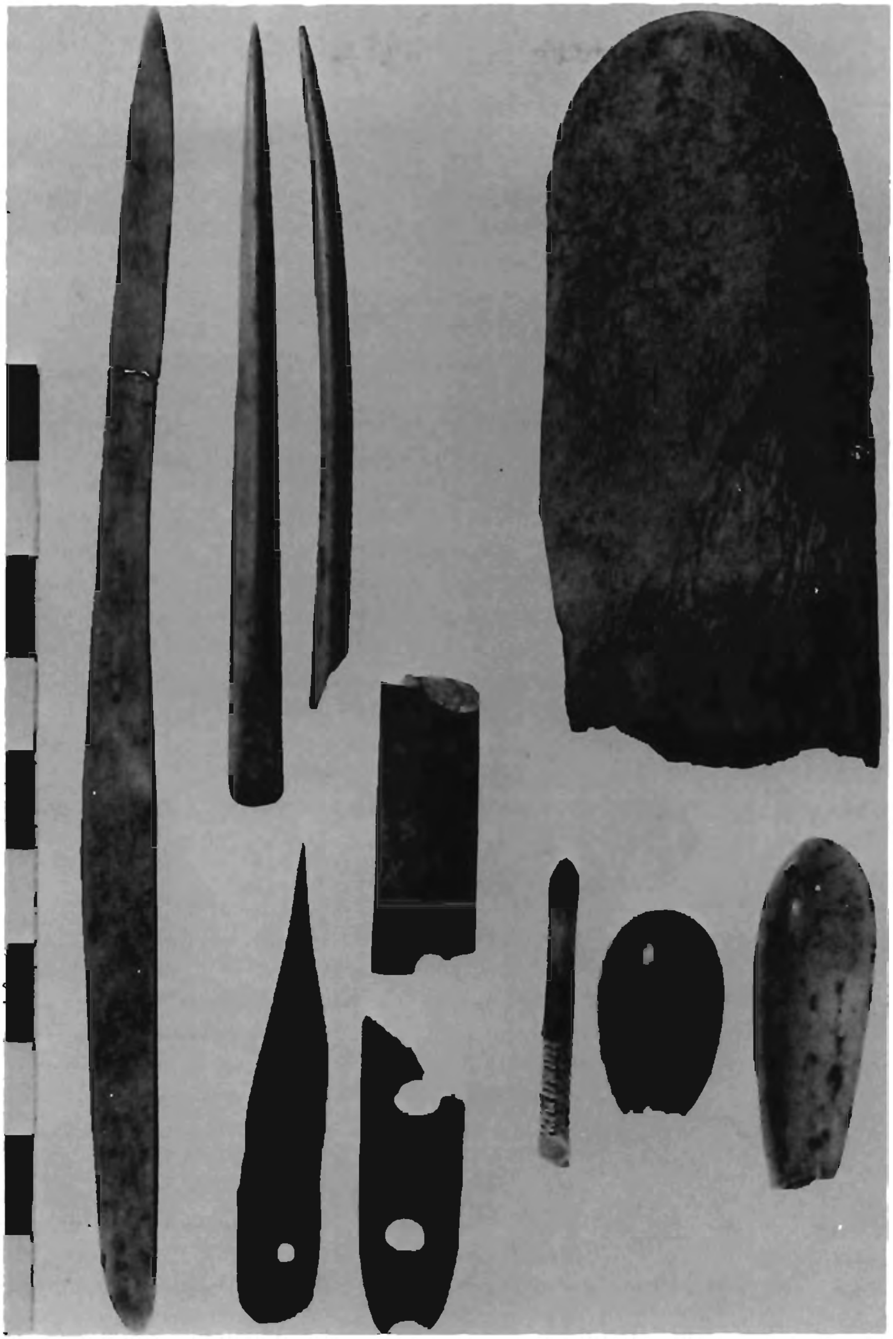

Fig. 20. Bone and ivory artefacts from the midden. From top left: long spatula (? sweat scraper); complete and broken 'hair-pins'; rib-bone scraper; 'bodkin' with perforation; two broken perforated pieces, broken pin or handle with cross-hatched decoration; bowl of ivory snuff-spoon showing keel on underside with row of notches; top view of bone snuff-spoon bowl.

Floral remains

A number of fragments of carbonised maize cob (*Zea mays*) were recovered from the midden from all levels and including the oval feature which predates the midden. Maize cultivation must therefore have been practised over a considerable time, not just at the end of the occupation. The largest piece includes the full circumference of a cob which has a diameter of 2,2 cm—smaller than most modern cobs (Fig. 21). The numerous partly burnt remains suggest that cobs were used as a supplementary fuel—a widespread practice in the grassland areas of today.

Faunal remains are described in detail by I. Plug & A. Brown (1982).

Fig. 21. Carbonised maize cob from the midden.

DISCUSSION

The fundamental settlement module of Mgoduyanuka and related sites is evidently the unit as represented by Settlement Unit 1. Diagnostic are the central primary stock pen opening uphill, usually with cobbled entrance, and the ring of rather dispersed huts. Such units are relatively dispersed from one another with the exception that sometimes several are grouped together in a linear pattern as represented by Settlement Unit 2. While these patterns certainly reflect social structure, the precise reason for the latter arrangement is not known. Ongoing archaeological and ethno-archaeological research at the Natal Museum is examining these and related problems.

Methods of hut construction other than the paved floors are not known. However, since the only form in use in the region at the onset of the colonial period in the early nineteenth century was the beehive made of timber and thatch, this is the most likely type. The absence of daga accumulations on the hut floors would tend to confirm this probability.

The built settlement pattern is consonant with a general Nguni classification (Kuper 1980) and distinctly different from those of Sotho and Tswana peoples of neighbouring regions (Maggs 1976). However, it differs significantly from the 'traditional Zulu' pattern (Bryant 1967, Krige 1965) which has the central stock-pen opening downhill, huts tightly clustered around it and an outer encircling wall.

Differences between the 'traditional Zulu' pattern and stone-built sites of Type B from the Babanango plateau of Zululand have been discussed previously (Hall & Maggs 1979, Hall 1981). Type B is characterised by an arrangement of linked primary enclosures not found further south. However, the uphill-opening and cobbled entrances to the primary enclosures provide a link between Type B and Mgoduyanuka which differentiates both from the 'traditional Zulu' pattern. The latter appears to have originated in the wooded lowlands of Zululand–Natal and therefore the observed differences seem to reflect a distinction between grassland and lowveld settlements. To what extent cultural or environmental factors led to this difference is not known.

Similarities are also evident between the ceramic assemblages from Mgoduyanuka and the Type B site of Nqabeni (Hall & Maggs 1979). The range of vessels is similar, though U-shapes seem to be lacking at Nqabeni, which may be because of the small sample of reconstructable vessels. Rare finger-nail impressed decoration occurs at both sites, but the applied *isumpa* ('wart' = boss) is absent at Mgoduyanuka. Differences include the much higher proportion of red ochre burnish, at Mgoduyanuka, which is essentially restricted to pots, as is decoration, while burnish and decoration is largely on bowls at Nqabeni.

Historic sites such as Mgungundlovu (Henderson, no date, and unpublished material in the Natal Museum) and Elangeni (Hall & Mack in press) also fall within this general tradition of pottery. The range of Mgoduyanuka vessels is present at both sites and decoration is rare. The applied *isumpa* accounts for most of the decoration, as at Nqabeni, but rows of simple impressions also occur. Burnishes are often found on the smaller or decorated vessels, although ochre is less common than at Mgoduyanuka.

The ceramic differences do seem to some extent to reflect minor regional styles, although it is too early yet to define them. But some of the differences are no doubt at the level of inter-site variability, especially as the historic sites were political capitals. In general the archaeological material is closely comparable with earlier museum material collected from the Natal Nguni (Lawton 1967).

Economically, the settlement was largely dependent on its domestic herds and agriculture. The 27 cattle and 22 sheep or goats contributed 98% of the meat, the remainder being from occasional hunting (Plug & Brown 1982). Cattle alone account for 93% and were clearly the dominant element in the herding economy. Of the small stock one individual could be firmly identified as a sheep, but none as a goat. The open grassland environment would be unsuitable for goats and it is therefore probable that most if not all the small stock were sheep.

The evidence of antelope hunting suggests quite a different pattern from that of contemporary Highveld settlements (Maggs 1976), where grassland species typified by large herds, such as the alcelaphines, provided an appreciable addition to the diet. The two identifiable antelope from Mgoduyanuka represent contrasting environments, *Pelea capreolus* (Grey rhebuck) occurring in small groups in sour upland areas while *Aepyceros melampus* (Impala) is a herd animal of savanna areas. A patch of thornveld some 12 km lower down the Tugela may have been the source of the latter, while the former may have occurred on high ground in the neighbourhood. The relative paucity of hunting may be a reflection of the dense terminal Iron Age settlement in the area.

The odd fishbone is insufficient evidence that fishing took place or made any contribution to the diet. The contrast between this site and the LSA shelter at Driel 10 km upstream (Maggs & Ward 1980), with its quantities of fishbone suggests that the common Nguni taboo against fish was in operation at Mgoduyanuka.

The only direct evidence of agriculture is the remains of carbonised maize cobs, but there is little doubt that this activity provided a major proportion of the diet. The 'stands' beside or behind the huts and the large, well-worn grindstones support this view. Maize was probably a major crop, since it is more suited to the area than the African grains, but other crops would also have been grown. The large lower grindstones may indeed reflect the grinding of maize with its large and hard grains, a suggestion which has been put forward for similar large stones from terminal Iron Age sites on the southern Highveld (Walton 1956).

The snuff spoons imply that tobacco was known and readily available, although it is possible that other herbs may have been used. There is no indication whether tobacco was grown locally or traded.

Although little iron was recovered it must have been in use for tools and weapons, and perhaps also for ornaments. The concentration of smelting sites in the Mabhija area (Maggs 1982) 60 km down the Tugela is the nearest known iron working.

The nature of the midden ash, together with the lack of charcoal, indicates that timber was not available for fuel. Cattle dung appears to have been the main source and livestock pens show the lowered floor levels typically resulting from the removal of dung for fuel (Bleek 1965, Maggs 1976). Maize cobs seem to have been a significant additional source.

The lack of timber suggests that, as today, the area was predominantly one of open grassland. Timber for hut building would probably have had to be brought from some distance, perhaps 10 km or even more.

Precise oral historical information on the inhabitants was not obtainable, but according to Bryant (1929) the Zizi people lived in this area until they were largely displaced during the Mfecane of the 1820s. Although radiocarbon is relatively imprecise during recent centuries, the seventeenth to eighteenth century date from the midden is in accord with the other evidence. Certainly Iron Age settlements on this scale in open country were unknown from this area after the onset of the Mfecane.

Although we do not know the duration of the settlement it was clearly occupied for some time. The four overlapping structures beneath the midden and the altered and robbed stone-walling nearby indicate several structural stages which must have taken place over several decades at least. Maize growing took place throughout most if not all of this time—from before the midden started accumulating to the end of the occupation.

The architecture, ceramics and bone work all point to a broad Nguni cultural affinity. The differences from previously described archaeological and historical communities distinguish Mgoduyanuka and related sites as a local expression of the terminal Iron Age within the broader grouping. The number of such settlements indicates a considerable population and the economy was evidently well adapted to the grassland environment. The settlements appear to have been the work of Zizi communities in the centuries immediately preceding the Mfecane.

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